

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

**1. (Cancelled)**

**2. (Currently Amended)** ~~[The implant of claim 1,]~~ An implant for implantation in a middle-ear chamber, said implant comprising:

a pliant membrane formed into a balloon having a physical volume, said balloon configured to fit within said middle-ear chamber and to contact an eardrum,  
wherein ~~[said pliant membrane forms a balloon having a physical volume,]~~ said balloon ~~[having]~~ has an acoustic impedance corresponding to an equivalent volume of at least 70% of said physical volume.

**3. (Currently Amended)** The implant of claim ~~[1]~~2, wherein said implant further comprises a tab extending from an end of said balloon.

**4. (Original)** The implant of claim 3 wherein said tab includes a radio-opaque marker.

**5. (Currently Amended)** The implant of claim ~~[1]~~2, wherein said balloon is an ovaloid having a maximum dimension along a principal axis extending between a first end and a second end, and said implant further comprises a tab extending from at least one of said first and second ends.

**6. (Original)** The implant of claim 5, wherein said balloon is dimensioned to be positioned by surrounding structures within said middle-ear chamber and to displace fluid and soft tissue therefrom, thereby forming a compliant cushion

presenting low acoustic impedance to motion of said eardrum.

7. **(Currently Amended)** The implant of claim ~~1~~2, wherein said pliant membrane comprises polymer of vinylidene chloride (PVDC).
8. **(Currently Amended)** The implant of claim ~~1~~2, wherein said pliant membrane comprises a biocompatible material.
9. **(Original)** The implant of claim 8, wherein said biocompatible material is a polymeric film free of toxic additives.
10. **(Currently Amended)** The implant of claim 8, wherein said pliant membrane is a multilayer membrane and said biocompatible material forms an outermost layer of said multilayer membrane, said outermost layer being exposed, upon implantation of said implant, to the interior of said middle-ear chamber.
11. **(Currently Amended)** The implant of claim ~~1~~2, wherein said pliant membrane is substantially impermeable to water, gases and body fluids during protracted contact with body tissues.
12. **(Currently Amended)** The implant of claim ~~1~~2, wherein said balloon contains at least one naturally occurring gas.
13. **(Currently Amended)** The implant of claim ~~1~~2, wherein said balloon contains at least one non-naturally occurring gas.
14. **(Original)** The implant of claim 13, wherein said non-naturally occurring gas is a large molecular size gas which is non-toxic and to which said pliant membrane is substantially impermeable.
15. **(Original)** The implant of claim 13, wherein said non-naturally occurring gas is sulfur hexafluoride.

16. (**Currently Amended**) The implant of claim ~~[1]~~2, wherein said balloon contains a gas mixture at atmospheric pressure.
17. (**Currently Amended**) The implant of claim ~~[1]~~2, wherein said balloon contains a gas mixture having a pressure in the range of approximately 50 mm of water below atmospheric pressure to approximately 50 mm of water above atmospheric pressure.
18. (**Currently Amended**) The implant of claim ~~[1]~~2, further comprising means for self-inflating said balloon, said self-inflating means including gas at sub-atmospheric pressure effective for self-inflation by diffusion following implantation of said implant into said middle-ear chamber.
19. (**Currently Amended**) The implant of claim ~~[1]~~2, further comprising means for initiating self-inflation following implantation, said means for initiating self-inflation including gases at partial pressures effective to initiate self inflation.
20. (**Currently Amended**) The implant of claim ~~[1]~~2, wherein said pliant membrane is between approximately 1 mil thick and approximately 4 mils thick.
- 21.-22. (**Cancelled**)
23. (**Currently Amended**) A surgical method according to claim ~~[22]~~28, wherein positioning a balloon includes positioning the balloon between the eardrum and the bone covering the cochlea.
24. (**Currently Amended**) A surgical method according to claim ~~[22]~~28, further comprising exposing the patient's middle ear by elevating a tympano-meatal flap before disposing said balloon in the middle ear.
25. (**Original**) The surgical method of claim 24, further comprising securing said balloon into position with an anchor formed of resorbable packing.

- 26. (Currently Amended)** The surgical method of claim ~~[22]~~**28**, further comprising positioning one or more additional balloons in the patient's middle-ear such that said additional balloons are mechanically coupled to said balloon.
- 27. (New)** An implant for implantation in a middle-ear chamber, said implant comprising:
- a plurality of balloons, each of which is formed from a pliant membrane, each balloon having a physical volume and an acoustic impedance corresponding to an equivalent volume of at least 70% of said physical volume, said balloons configured to fit within said middle-ear chamber with at least one of said balloons at least partially in contact with the eardrum.
- 28. (New)** A surgical method for treating middle-ear hearing loss of a patient, said method comprising:
- positioning a balloon in the patient's middle ear at least partially in contact with the eardrum, said balloon being formed of a thin pliant membrane of biocompatible material that defines a physical volume, said balloon having an acoustic impedance corresponding to an equivalent volume of at least 70% of said physical volume, said pliant membrane being substantially impermeable to water and to gases during extended contact with body tissues.